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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/718,073

11/20/2003

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D3131

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EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/718,073 | Applicant(s) JASTI ET AL. | |
| | Examiner Hanh Phan | Art Unit 2613 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12,13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 02/27/2007.
2. The indicated allowability of claims 2-10, 12 and 14-20 is withdrawn in view of the newly discovered reference(s) to Lee et al (US Patent No. 6,728,026) and Taylor et al (US Patent No. 5,963,361) . Rejections based on the newly cited reference(s) follow.

Claim Objections

3. Claim 4 is objected to because of the following informalities:
 - In claim 4, line 1, the phrase "The dispersion compensator of claim 2" should be changed to --The dispersion compensator of claim 1--.
 - In claim 15, line 1, the phrase "The method of claim 14" should be changed to --The method of claim 13--.
 - In claim 17, line 1, the phrase "The method of claim 14" should be changed to --The method of claim 16--.Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claim 12 recites the limitations "**the tunable filter**" and "**said second reference signal**" in lines 3 and 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 4, 13 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al (US Patent No. 6,728,026).

Regarding claims 1, 13 and 16, referring to Figure 1, Lee et al teaches a dispersion compensator, comprising:

an input port (Fig. 1) for receiving a WDM optical signal (i.e., col. 2, lines 1-42);

a dispersion compensating element (i.e., a dispersion compensating fiber DCF 110, Fig. 1) coupled to the input port for substantially compensating the WDM optical

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signal for dispersion that has accumulated along an external transmission path (i.e., col. 2, lines 1-42);

an output port (Fig. 1) for directing the dispersion compensated WDM optical signal to an external element (i.e., col. 2, lines 1-42); and

a dynamic power controller (i.e., a variable optical attenuator 108 and controller 112, Fig. 1) for maintaining a total power of the WDM signal below a prescribed level prior to receipt of the WDM optical signal by the dispersion compensating element,

wherein the prescribed level below which the total power of the WDM optical signal is to be maintained is sufficient to substantially avoid non-linear interactions in the dispersion compensating element (i.e., col. 2, lines 1-42).

Regarding claims 3, 4 and 17-20, Lee et al teaches all the aspects of the claimed invention as set forth in the rejection above. Lee et al further teaches a variable optical attenuator (i.e., VOA 108, Fig. 1) located at a point intermediate to the input port and the dispersion compensating element (i.e., DCF 110, Fig. 1), and a control arrangement (i.e., control circuit (VOA) 112, Fig. 1) for adjusting attenuation of the VOA based on a measured power level of the WDM optical signal (i.e., col. 2, lines 1-42).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent No. 6,728,026) in view of Taylor et al (US Patent No. 5,963,361).

Regarding claim 5, Lee et al teaches all the aspects of the claimed invention except fails to specifically teach a first optical tap located at a point intermediate to the input port and the dispersion compensating element for receiving a portion of the WDM optical signal and a controller for adjusting the attenuation of the VOA based on the received portion of the WDM optical signal. However, Taylor et al teaches teach a first optical tap located at a point intermediate to the input port and the dispersion compensating element for receiving a portion of the WDM optical signal and a controller for adjusting the attenuation of the VOA based on the received portion of the WDM optical signal (i.e., Fig. 5, col. 5, lines 34-47). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the first optical tap located at a point intermediate to the input port and the dispersion compensating element for receiving a portion of the WDM optical signal and a controller for adjusting the attenuation of the VOA based on the received portion of the WDM optical signal as taught by Taylor et al in the system of Lee et al. One of ordinary skill in the art would have been motivated to do this since allowing maintaining a uniform gain spectrum to avoid signal distortion due to optical nonlinearities in the dispersion compensating element.

Regarding claim 6, Lee et al further teaches an optical tunable filter (i.e., optical filter 640, Figs. 8 and 9) coupled to the first optical tap for receiving a portion of the WDM optical signal therefrom, and a first photodetector (i.e., detector 650, Figs. 8 and

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9) coupled to the optical tunable filter for generating a first reference signal in response to said portion of the WDM optical signal received from the optical tunable filter, the first reference signal being directed to the controller (i.e., controller 660, Figs. 8 and 9)(col. 8, lines 6-14).

Regarding claims 7 and 8, the combination of Lee et al and Taylor et al teaches the first optical tap is located at a point intermediate to the input port and the VOA (i.e., Fig. 5 of Taylor et al).

Regarding claim 9, the combination of Lee et al and Taylor et al teaches the first optical tap is located at a point intermediate to the VOA and the dispersion compensating element (i.e., Fig. 8 of Taylor et al).

Regarding claim 10, the combination of Lee et al and Taylor et al teaches further comprising: a second optical tap located at a point intermediate to the VOA and the dispersion compensating element for receiving a portion of the attenuated WDM optical signal; a second photodetector coupled to the second optical tap for generating a second reference signal in response to said received portion of the attenuated WDM optical signal; and a comparator having inputs receiving the second reference signal and a control signal provided by the controller and having an output for providing a drive signal to the VOA for adjusting the attenuation thereof (i.e., Fig. 8 of Taylor et al).

Allowable Subject Matter

10. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 3-13 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER